
Podandroyne hispidula, *P. jamesonii*, and *P. mathewsii* (Capparidaceae), Three Valid Species from Ecuador and Peru

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ABSTRACT. New combinations are made for three mostly allopatric species formerly included in *Podandroyne brachycarpa*: *P. hispidula*, *P. jamesonii*, and *P. mathewsii*.

Podandroyne is a taxonomically complicated neotropical genus of about 26 species that has long been in need of revision. An outdated provisional synopsis to the species (Woodson, 1948) is the only comprehensive account available, and there are no regional treatments for Colombia and Ecuador, two countries with the highest concentration of taxa. In Ecuador alone there are 11 species, 5 of which remain undescribed.

The following nomenclatural changes involve several populations from Ecuador and Peru, all long believed (Brako & Zarucchi, 1993; Woodson, 1948) to be synonymous with *Podandroyne brachycarpa* (DC.) Woodson sensu lato, the most abundant and taxonomically variable taxon in the genus, generally characterized by the presence of compound leaves, foliaceous bracts, and oblong to ovoid fruits. However, from observation of herbarium specimens, I have concluded that *P. hispidula*, *P. jamesonii*, and *P. mathewsii*, although very closely related to one another, are clearly distinct, with neither any real overlap in geography nor any intergradation in morphology. In fact, nearly all Peruvian collections previously named *P. brachycarpa* belong to either *P. hispidula* or *P. mathewsii* (only two collections from Dept. Amazonas are true *P. brachycarpa*), while material from Ecuador is mostly *P. brachycarpa* and partly a new species to be described.

Two of the following new combinations are needed for the account of the Capparidaceae in the forthcoming *Catalogue of the Vascular Plants of Ecuador*.

Podandroyne hispidula (DC.) Cochrane, comb. nov. Basionym: *Gynandropsis hispidula* DC., Prodr. 1: 238. 1824. TYPE: Peru. [Junin:] Pueblo Nuevo, Pavón s.n. Original labels read: "Cleome hirsuta Peru," "Cleome coccinea in Peruvia Ruiz," and "E Peruvia [Herb.] Pavon," (holotype, G; fragments of holotype, F, WIS; photos of holotype, GH, NY, US, WIS; isotypes, B, BM, G, HAL, MA not seen, P; fragment of MA isotype, F).

Podandroyne hispidula is characterized by its relatively sparse hispidulous pubescence on the inflorescences (vegetative parts range from sparsely hispidulous to densely velutinous), persistent small bracts, large number of bisexual flowers, glabrous sepals, copiously villous-tomentulose ovaries, and hispidulous capsules. It occurs from the much-traveled Tingo María (Dept. Huánuco)–Pucallpa (Loreto) road southward through Junin to Cuzco, partly overlapping the range of *P. mathewsii* subsp. *mathewsii*.

Podandroyne jamesonii (Briquet) Cochrane, comb. nov. Basionym: *Gynandropsis jamesonii* Briquet, Annuaire Conserv. Jard. Bot. Genève 17: 388. 1914. TYPE: Ecuador. "461 Leguminosa Foot of the Cuesta of Angas 1000 feet above the sea level Ecuador Jameson 1847" (holotype, G; fragment of holotype, F; photos of holotype, GH, MO, NY, US, WIS; isotypes, BM, G, K, US).

Podandroyne jamesonii is a perfectly distinct species characterized by a lax, pliantly divergent raceme with a slender rachis; small, bright red flowers (pedicel, calyx, and corolla); and small, narrowly oblong or sometimes rhomboid fruits. Somewhat similar plants occur regularly among the large quantity of herbarium material that has been identified over the years as *P. brachycarpa*, but none have inflorescences that are as flexible, delicate, or loosely flowered, and these characters in conjunction with the arcuate-spreading pedicels and short, triangular sepals (basally connate and apically much less acute) help separate *P. jamesonii* from the remainder of the "brachycarpa" group of *Podandroyne*. The species ranges from southernmost Prov. Esmeraldas southward throughout much of the *Región Occidental* to Guayas and northern Azuay.

Podandrogyne mathewsii (Briquet) Cochrane, comb. nov. Basionym: *Gynandropsis mathewsii* Briquet, *Annuaire Conserv. Jard. Bot. Genève* 17: 387. 1914. TYPE: Peru. [Huánuco:] “193 Casapi,” 1835, *Mathews 193* (holotype, G; fragment of holotype, F; photos of holotype, GH, NY, US, WIS; isotypes: LE, P—2 sheets). Specimens precisely matching one another were distributed as “Cleome 193,” “Cleome 2021” (BM, CGE—2 sheets, E), and “leg. Matthews [sic] no. [or nr.] 679” (GOET). It might be assumed that some or all of these specimens, at least those bearing the numbers 193 and 2021, are part of the type collection, because both numbers appear, albeit in different inks, on the same label on a sheet of *P. mathewsii* in LE.

Podandrogyne mathewsii can be identified by its narrow glandular-puberulent sepals, which taper very gradually to the tip (and are often wrinkled in herbarium material) and usually equal or exceed the red corolla. In addition, *P. mathewsii* has ovoid- or oval-oblong fruits. It is similar and probably closely related to *P. hispidula*, also of Peru, but comes nearest to *P. brachycarpa* sensu stricto, the most widely distributed species of the “brachycarpa” group. *Podandrogyne brachycarpa* is also pubescent and often possesses bracts, but can be distinguished by its orange flowers, the sepals of which are much shorter than the petals, are connate at the base, subacuminate and sharp at the tips (but not attenuate), and more or less puberulent, at least near the base and toward the midnerve. In addition, *P. brachycarpa* usually has narrowly oblong fruits, whereas *P. mathewsii* has slightly compressed ovoid- or oval-oblong fruits.

Podandrogyne mathewsii* subsp. *ulei (Briquet) Cochrane, comb. et stat. nov. Basionym: *Gynandropsis ulei* Briquet, *Annuaire Conserv. Jard. Bot. Genève* 17: 385. 1914. TYPE: Peru. Loreto: “Im Walde des Pongo de Chilcayo, Tarapoto,” Nov. 1902 (fl, fr), *Ule 6430* (holotype, G; isotypes, B, L; photos of B isotype, F, GH, NY, US, WIS).

There are two variants among herbarium specimens. *Podandrogyne mathewsii* subsp. *ulei*, representing one extreme, might warrant recognition as a full species based on more study of a larger series of collections. From *P. mathewsii* subsp. *mathewsii* these specimens differ in tending to be more pubescent, to have ovate-oblong rather than suborbi-

cular flowers, and sepals (7–16 rather than 4–9 mm) and petals (8–13 vs. 5–9 mm) that are longer. In fact, sepal length is more variable in *P. mathewsii* subsp. *ulei*, namely from 1–5 mm shorter than to 1–3 mm longer than the petals instead of equaling to 1–3 mm shorter than the petals as in typical *P. mathewsii*. However, flower size and absolute and relative sepal lengths appear to show continuous variation within this species when treated broadly. Incomplete differentiation into a more robust entity with slightly larger flowers and fruits and coarser pubescence and one that is of average stature with finely hairy stems and leaves is parallel to the clinal situation found in *P. densiflora* (Benth) H. H. Iltis & Cochrane, which ranges from Colombia into Venezuela.

Typical *Podandrogyne mathewsii* subsp. *mathewsii* ranges from southern Dept. San Martín to southern Cuzco, while *P. mathewsii* subsp. *ulei* occurs mostly in northern San Martín and reappears in Junin and south-central Ecuador. Only one of the five collections from Ecuador bears a fruit, and only two have expanded flowers, but in all the racemes are like those of *P. mathewsii*. The large flower buds with their subcaudate, glandular-puberulent sepals (11–16 mm long, from just equaling to usually exceeding the petals by up to 4 mm) are typical of the “ulei” type. The pistillate flowers have androgynophores 12–14 mm long and gynophores 4–5 mm long.

There is a unique collection made in 1944 in the vicinity of Indanza, Prov. Morona-Santiago, Ecuador (*Jørgensen OHJ-42*, NY), which deserves special comment. It has the large flowers typical of plants of eastern Peru and eastern Ecuador, but its capsules are 4-valved, a most unusual condition. The presence of four placentae, previously unknown in the Cleomoideae and rare in several genera of woody Capparidaceae, suggests that in this abnormal plant there must have been a teratological shift from two to four carpels. Rare as it is, this condition may nevertheless be due to a simple mutation.

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Literature Cited

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